UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	**Applicant(s)**
Office Action Summary	10/731,047	DHANAPAL ET AL.
	Examiner	**Art Unit**	
	Thuy Dao	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _03_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 May 2007*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-17,29-30_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-17,29-30_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 December 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *12/08/03*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

DETAILED ACTION

1. This action is responsive to the amendment filed on May 14, 2007, which is a response to the restriction requirement mailed March 30, 2007. Applicants elected Group A, consisting of claims 1-17 and 29-30, without traverse (Remarks, page 6, lines 2-3).

2. Claims 1-17 and 29-30 have been examined.

Response to Amendments

3. Per Applicants' request, claims 18-28 (Groups B and C) have been canceled as non-elected claims.

Information Disclosure Statement

4. The Office acknowledges receipt of the Information Disclosure Statement filed on December 8, 2003. It has been placed in the application file and the information referred to therein has been considered by the examiner.

Drawings

5. The drawings are objected to because of minor informalities:

FIG. 11, the top sentence is considered to read as - -[[Frome]] From Rate Manager- -; and

FIG. 19, in block 1908, the phrase is considered to read as - -Output [[Exacutable]] Executable Component- -.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities: acronyms should be spelled out at the first appearances in the disclosure (e.g., page 2, IDS, ASCII; page 4, XML; page 10, OO/ER).

Appropriate correction is required.

Claim Objections

7. Claims 1-10 and 29-30 are objected to because of minor informalities.

Claim 1:

"Graphical User Interface" is considered to read as - -graphical user interface - - as recited in independent claim 11;

"including the algorithmic function or functions" in lines 8-9 is considered to read as - -including one or more algorithmic functions- -;

"the data of the schema output as a markup file" is considered to read as - -the output from the graphical user interface as a markup file- -.

Claims 2-10 and 29-30:

The phrase is considered to read as - -The procedural computation engine of claim ...- - as recited in independent claim 1.

Claim 3:

"XML" should be spelled out at the first appearance in claims. For example, - - Extensible Markup Language (XML) - -.

Claim 5-7:

The phrase is considered to read as - -wherein the <u>executable</u> computation <u>model is a rate model</u> [[models are rated models]] - - as recited in independent claim 1.

Appropriate correction is required.

Claim Rejections – 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1-17 and 29-30 are rejected because the claimed invention is directed to non-statutory subject matter: "*A procedural computation engine ...*" (claims 1-10 and 29-30) and "*A rating service ...*" (claims 11-17).

They amount to Functional Descriptive Material: "Data Structures" representing descriptive material per se or "Computer Programs" representing computer listings per se.

Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Similarly, computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither

computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions. See MPEP 2106.

Under the principles of compact prosecution, claims 21-23 and 25-30 have been examined as the Examiner anticipates the claims will be amended to obviate these 35 USC § 101 issues. For example, - -A procedural computation engine <u>embodied in a hardware computing system</u> ...- - and - -A rating service <u>embodied in a hardware computing system</u> ...- - as disclosed in specification, page 9, lines 16-22.

Claim Rejections – 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: '

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1, 4-11, 14-17, and 29-30 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 7,107,277 to Mitra et al. (hereinafter "Mitra").

Claim 1:

Mitra discloses *a procedural computation engine for generating and serving executable high-level code comprising:*

a graphical user interface for creating procedural computation schemas (e.g., FIG. 2, Calculation Specifications 204 created/generated by a graphical user interface, col.6: 36-67; col.7: 8-31; col.9: 9-27);

a parser for interpreting output from the graphical user interface (e.g., FIG. 2, Calculation Engine 200, col.7: 8-31; col.9: 27 – col.10: 59);

a compilation component for hierarchal node-structuring of data (e.g., FIG. 2, Calculation Engine 200; FIG. 3-5, col.11: 34 – col.12: 64); *and*

a server component for providing access to generated information (e.g., FIG. 1, col.5: 50 – col.6: 35; col.2: 15-32);

characterized in that a programmer operating through the graphical user interface pre-creates at least one procedural computation schema including one or more algorithmic functions and. input needed to produce computational results (e.g., col.7: 8-31; col.2: 39-54; col. 9: 9-27),

the output from the graphical user interface as a markup file interpreted by the parser (e.g., col.2: 33-64; col.7: 8-31; col.7: 8-31) *and*

in cooperation with the compilation component generates an executable computation model accessible and executable through the server component (e.g., FIG. 3-5, col.11: 34 – col.12: 64; col.9: 27 – col.10: 59).

Claim 4:

The rejection of claim 1 is incorporated. Mitra also discloses *the compilation component includes a lexical scanner and a code generator* (e.g., FIG. 2, col.7: 8-31; col.6: 36-46).

Claim 5:

The rejection of claim 1 is incorporated. Mitra also discloses *the executable computation model is a rate model pre-stored for access by the server component upon request over a network connection* (e.g., col.2: 46-54; col.7: 8-31).

Claim 6:

The rejection of claim 1 is incorporated. Mitra also discloses *the executable computation model is a rate model designated as a user function to be embedded in another rate model* (e.g., col.6: 36-67; col.2: 39-54).

Claim 7:

The rejection of claim 1 is incorporated. Mitra also discloses *the computation models are rate models and a knowledgebase configurator has access to the stored rate models through one of remote method invocation or through remote call procedure over a network connection* (e.g., col.5: 50 – col.6: 35).

Claim 8:

The rejection of claim 5 is incorporated. Mitra also discloses *the network connection is one of an Internet or an Intranet connection* (e.g., col.2: 15-32).

Claim 9:

The rejection of claim 7 is incorporated. Mitra also discloses *the network connection is one of an Internet or an Intranet connection* (e.g., col.2: 15-32).

Claim 10:

The rejection of claim 2 is incorporated. Mitra also discloses *the processing application can interpret Extensible Markup Language and can save data in the form of Extensible Markup Language* (e.g., col.2: 46-54; col.7: 8-31).

Claim 11:

Mitra also discloses *a rating service comprising:*

a procedural computation engine having a graphical user interface for creating procedural rating schemas (e.g., FIG. 2, col.6: 36-67; col.9: 9-27; col.7: 8-31);

a parser for interpreting output from the graphical user interface (e.g., FIG. 2, col. 6: 36-46; col.9: 27 – col.10: 59; col.2: 33-64);

a compilation component for hierarchal node-structuring of data (e.g., col.6: 36 – col.7: 31; FIG. 3-5, col.11: 34 – col.12: 64); *and*

a server component for providing access to generated information (e.g., FIG. 1, col.5: 50 – col.6; 35; col.2: 15-32);

a knowledgebase configurator for configuring service requests (e.g., FIG. 5, col.12: 1-64; FIG. 8-12, col.12: 65 – col.13: 28); *and*

a software interface application through which requests for rating are submitted (e.g., col.2: 9-14; col.2: 22-33; col.3: 32-46);

characterized in that an end user accesses the configurator through the interface application and submits parameters for configuration of a service request whereupon the configurator calls the server component of the computation engine (e.g., FIG. 2, col.6: 36-67; col.2: 9-33; col.3: 32-46) *and*

selects a rate model from a pool of rate models that fits the request parameters (e.g., FIG. 3-5, col.11: 34 – col.12: 64; FIG. 8-12, col.12: 65 – col.13: 28),

the rate model applied to and executed within the configuration model to produce the rating results through the application interface (e.g., FIG. 2, Calculation Results 206, col.6: 55 – col.7: 15; col.12: 65 – col.13: 28).

Claim 14:

The rejection of claim 11 is incorporated. Mitra also discloses *the configurator is a Web-based configurator and calls the server component of the computation engine using one of remote method invocation or remote call procedure* (e.g., col.2: 22-38).

Claim 15:

The rejection of claim 11 is incorporated. Mitra also discloses. *a service configuration contains more than one rate model, the models individually executed according to optional scenarios* (e.g., col.1: 46 – col.2: 14).

Claim 16:

The rejection of claim 11 is incorporated. Mitra also discloses *a service configuration contains more than one rate model, one rate model designated as a user function embedded in another rate model* (e.g., col.7: 8-31; col.2: 46-54; col.6: 36-67).

Claim 17:

The rejection of claim 11 is incorporated. Mitra also discloses *integrated with a software framework for enabling client security verification, user interface generation, workflow management, database search functionality, and language transformation for presentation to alternate platforms and interfaces* (e.g., col.1: 32-67; col.2: 23-54).

Claim 29:

The rejection of claim 4 is incorporated. Mitra also discloses *the compilation component includes at least one block translator for scoping variables* (e.g., col.7: 8-31; col.6: 36-46).

Claim 30:

The rejection of claim 4 is incorporated. Mitra also discloses *the compilation component creates loop constructs to resolve variables in the case of a dynamic query, the loop calculations performed to create a formula* (e.g., col.9: 27 – col.10: 59; col.11: 34 – col.12; 64).

12. Claims 1 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Publication No. 2004/0117202 A1 to Winklevoss et al. (hereinafter "Winklevoss").

Claim 1:

Winklevoss discloses *a procedural computation engine for generating and serving executable high-level code comprising:*

a graphical user interface for creating procedural computation schemas (e.g., FIG. 1, blocks 103-104, [0042-0043]; FIG. 2, GUI of computer 135, [0059-0062]; FIG. 4, blocks 472-480);

a parser for interpreting output from the graphical user interface (e.g., FIG. 1, Calculation Module 120, [0043-0044]; FIG. 2, Calculation Engine, [0054-0056]; FIG. 4, blocks 482-484);

a compilation component for hierarchal node-structuring of data (e.g., FIG. 6, [0088-0091]; FIG. 8, [0093-0098]); and

a server component for providing access to generated information (e.g., FIG. 2, [0050-0054]; FIG. 3, [0064-0070]);

characterized in that a programmer operating through the graphical user interface pre-creates at least one procedural computation schema including one or more algorithmic functions and input needed to produce computational results (e.g., [0042-0043]; [0059-0062]; FIG. 4, blocks 472-480),

the output from the graphical user interface as a markup file interpreted by the parser (e.g., [0055], [0087], [0089]) *and*

in cooperation with the compilation component generates an executable computation model accessible and executable through the server component (e.g., FIG. 4, blocks 484-486, [0072-0076]; FIG. 7, [0089-0092]; FIG. 27A-C, [0210-0212]).

Claim 11:

Winklevoss discloses *a rating service comprising:*

a procedural computation engine having a graphical user interface for creating procedural rating schemas (e.g., FIG. 1, blocks 103-104, [0042-0043]; FIG. 2, [0059-0062]);

a parser for interpreting output from the graphical user interface (e.g., FIG. 4, blocks 472-480; [0055], [0087], [0089]);

a compilation component for hierarchal node-structuring of data (e.g., FIG. 6, [0088-0091]; FIG. 8, [0093-0098]); and

a server component for providing access to generated information (e.g., FIG. 2, [0050-0054]; FIG. 3, [0064-0070]);

a knowledgebase configurator for configuring service requests; a software interface application through which requests for rating are submitted (e.g., FIG. 9, [0106-113]; [0180-0184]; [0052-0058]);

characterized in that an end user accesses the configurator through the interface application and submits parameters for configuration of a service request whereupon the configurator calls the server component of the computation engine (e.g., FIG. 5, [0082-0087]; FIG. 19, [0180-0184]) *and*

selects a rate model from a pool of rate models that fits the request parameters (e.g., [0055], [0087], [0106-0113]),

the rate model applied to and executed within the configuration model to produce the rating results through the application interface (e.g., FIG. 4, blocks 484-486, [0072-0076]; FIG. 7, [0089-0092]; FIG. 27A-C, [0210-0212]).

Claim Rejections – 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mitra in view of Admitted Prior Art (hereinafter "APA").

Claim 2:

The rejection of claim 1 is incorporated. Mitra also discloses *the computation model is a rating model* (e.g., FIG. 2, col.6: 36-67). Mitra does not explicitly disclose *the graphical user interface is of the form of an interactive spreadsheet processing application.*

However, in an analogous art, APA discloses *the graphical user interface is of the form of an interactive spreadsheet processing application* (e.g., page 3, lines 14-16).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine APA's teaching into Mitra's teaching. One would have been motivated to do so to perform very complex business calculations as suggested by APA (e.g., page 3, lines 14-15).

15. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitra in view of US Patent Publication No. 2005/0149538 A1 to Singh et al. (hereinafter "Singh").

Claim 3:

The rejection of claim 1 is incorporated. Mitra does not explicitly disclose *the parser is adapted to write in Java Document Object Model structure.*

However, in an analogous art, Singh further discloses *the parser is adapted to write in Java Document Object Model structure* (e.g., [0122-0124]).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Singh's teaching into Mitra's teaching. One would have been motivated to do so because JDom is a convenient in-memory representation of XML as suggested by Singh (e.g., [0124]).

Claim 13:

The rejection of claim 11 is incorporated. Claim 13 recites the same limitations as those of claim 3, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the references teach all of the limitations of the above claim, they also teach all of the limitations of claim 13.

16. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mitra in view of "Siebel eService Administration Guide Addendum For Industry Applications – Version 7.5.3", published July 2003 (hereinafter "Siebel 7").

Claim 12:

The rejection of claim 11 is incorporated. Mitra does not explicitly disclose *the software interface application is an insurance application suite.*

However, in an analogous art, Siebel 7 further discloses *the software interface application is an insurance application suite* (e.g., Chapter 2, Siebel Insurance eService, pp. 57-62).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Siebel 7's teaching into Mitra's teaching. One would have been motivated to do so to provide customers and companies insurance e-services as suggested by Siebel 7 (e.g., page 57).

Conclusion

17. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone is (571) 272 8570. The examiner can normally be reached on Tuesday, Thursday, and Friday from 6:00AM to 6:00PM.
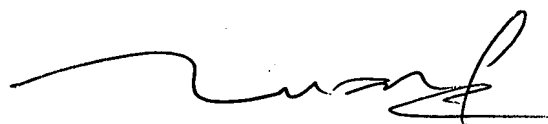
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T. Dao

TUAN DAM
SUPERVISORY PATENT EXAMINER